

# Douglas Ta

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## Experience

**Freedom Scientific** | *NLP Engineer (Part-time)*

**Remote** | **August 2023 – April 2024**

- Tasked to develop a CoPilot prototype for JAWS, a screen reader software designed to assist visually impaired users to use computers.
- Applied finetuning as well as implemented retrieval augmented generation techniques to leverage a LLM to help beginner users better understand how to use JAWS

**Fire Neural Network** | *Data Scientist*

**UF** | **January 2023 – August 2023**

- Utilized satellite data as well as data collected from High-Risk Lightning Detector's to train and maintain supervised machine learning models that predicted wildfires caused by lightning strikes
- Performed analysis on time series modeling of weather data to enhance predictive forecasting of machine learning models

## Education

**University of Florida, Gainesville, Florida** | **Class of Spring 2026**

Master of Science in AI Systems

**GPA** | **TBD**

**University of Florida, Gainesville, Florida** | **Class of 2024**

Bachelor of Science in Computer Science

Business Administration Minor

**GPA** | **3.7**

## Research

**Gong Laboratories** | *Research Intern*

**UF** | **August 2024 - Present**

- Researching multi-modal vision-language models to be used for downstream tasks such as medical segmentation

## Projects

**Image Generation – Python, TensorFlow**

- Trained a Generative Adversarial Network and Variational Autoencoder on the MNIST dataset to produce new images of hand-written numbers utilizing the Adam optimization

**Housing Price Predictor – Python, Scikit-Learn**

- Trained a supervised machine learning model using various algorithms to accurately predict the price of houses using both provided and engineered features

**Building My Own Programming Language – Java**

- Developed a Java based programming language to better understand the principles behind languages

## Technical Skills

**Language Proficiency:**

- |        |            |
|--------|------------|
| • C++  | • Python   |
| • Java | • HTML/CSS |

**Technical Experience With:**

- |                                  |                             |
|----------------------------------|-----------------------------|
| • PyTorch/TensorFlow             | • Machine Learning Modeling |
| • Retrieval Augmented Generation | • LLM Finetuning            |
| • Langchain                      | • Azure                     |

## Leadership

**UF Badminton Club** | *President of UF Badminton*

**UF** | **Fall 2022 – Spring 2024**

- Organized service events for children's organizations teaching badminton and donating equipment
- Raised club funds by hosting intercollegiate badminton tournaments for universities in the South